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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,709	01/18/2001	Klaus Greubel	GREUBEL	5669

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EXAMINER

JONES, JUDSON

ART UNIT PAPER NUMBER

2834

DATE MAILED: 10/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/720,709

Applicant(s)

GREUBEL ET AL.

Examiner

Judson H. Jones

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 2, 4-8 and 10-15 is/are rejected.
- 7) ☒ Claim(s) 3 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

The indicated allowability of claims 2-13 in the telephone interview of April 30, 2002 is withdrawn in view of the translation of Japanese reference 9-74733, particularly paragraph 0035 on page 13 of the translation. A US PTO form 892 has been filled out to make this translation and the translation of JP 103457 of record. Copies are not being sent to Applicant's representative because copies were previously faxed.

The objection to the oath is withdrawn.

The proposed drawing correction has been received. The objection to the drawings is withdrawn.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2, 6-8 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese reference 9-74733 (of record). The '733 reference discloses a primary part with slots 3 and a secondary part with a sequence of poles 11 formed by permanent magnets, the primary part having end pieces 7,8 with end faces perpendicular to the movement direction of the linear motor and where the air gap between the end pieces and the secondary part changes gradually within a single pole pitch as described on page 12 paragraph 0032 lines 7-10, on page 13 paragraph 0035 in the translation of the '733 reference and as shown in figure 2. According to paragraph 0015 on pages 6 and 7 of the translation, "Figure 1 is a side view illustrating this embodiment, and Figure 2 illustrates a side view of the main part." In Figure 1 there are slots for windings in the curved portion of the primary while in Figure 2 there are no slots for windings. Paragraph 0035 on page

Art Unit: 2834

13 of the translation clarifies what is being shown in Figures 1 and 2. Figure 1 shows an embodiment with a one piece construction. In Figure 2 end pieces 14 are constructed separate from main piece 5. While in Figure 1, slots and windings are shown on the tapered part of the primary, no slots and windings are shown in Figure 2. Furthermore, there is no mention in the specification of Japanese reference '733 about providing slots and windings on any separately manufactured end pieces.

In regard to claims 6, 7, 12 and 13, see Japanese reference '733 figure 10.

Claim Rejections - 35 USC § 103

Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese reference '733 in view of Oishi (of record). Japanese reference '733 discloses the linear motor but does not disclose a pole gap at an angle of other than 90 degrees with respect to the direction of the linear motor. However Oishi teaches this feature in figures 4 and 8 for the purpose of reducing detent thrust. See Oishi column 1 line 54-68 and column 5 lines 29-32. Since Oishi and Japanese reference '733 are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a pole gap at an angle other than 90 degrees in order to reduce the detent thrust and thus make the motor operate more smoothly, linearly and quietly.

Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese reference '733 in view of German reference 37 22 153 (of record). Japanese reference '733 discloses the linear motor but does not disclose pole gaps with varying widths. However German reference '153 discloses this feature in figure 3 for the purpose of reducing noise produced by the detent thrust of the motor. Since German reference '153 and Japanese reference '733 are both

from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized pole gaps of varying width in order to reduce the detent thrust of the motor and thus make the motor operate more smoothly, linearly and quietly.

Allowable Subject Matter

Claims 3 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose or teach an end piece having the geometry specified in claims 3 and 9.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ
October 9, 2002

Judson Jones
AB 2834